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ABSTRACT

Two studies were conducted to determine the effects of specific reading strategies on content area comprehension and reading skills. The strategies tested were a specific study guide, directed reading questions, cognitive organizer, and structured overview. In the first study, 225 students enrolled in a community college history course were randomly assigned to four experimental and six control groups and given a history pretest and posttest and a diagnostic reading test. The experimental groups used the study guide treatment, while the control groups followed their regular classroom procedure. In the second study, 118 eighth grade history students were randomly assigned to one of the remaining three reading strategies or to a control group. The multiple choice test accompanying ten selections from an SRA series, as well as a diagnostic reading test were used as pretests and posttests. Each treatment group was introduced to an appropriate prereading strategy before reading each of the ten selections, while the control group read the selections without prereading activities. The results of both studies indicated that content area comprehension was positively affected by the use of the study guide, cognitive organizer, structured overview, and directed reading questions. (HTH)

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Crashing Content Reading Problems With Reading Strategies

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Crashing Content Reading Problems With Reading Strategies

Fry and Putnam (5) and Roe, Scott, and Burns (9) are among educators who are concerned about the low grades often made by students in content classes. Such a performance indicates that these students are encountering factors which fail to enhance learning. Herber (6) contends that reading skill deficiencies have been isolated as a factor contributing to the low performances.

A student must be competent in certain reading skills in areas of comprehension, vocabulary, and study skills in order to read competently in the content areas. It tends to be a general consensus that lack of an ability to exercise specific areas of these skills will interfere with performance.

Reading strategies are often used to help students cope with content area reading problems. These strategies help organize thought processes about a reading and thus positively affect comprehension. They are defined by their relative position to a selection and by the reading skill focus characterizing the tasks (comprehension or vocabulary). McFeeley (7) and Palmer (8) note that these strategies make possible a management of the reading process to increase comprehension. They are valuable in academic settings where students need aid in understanding reading materials from several content disciplines. Guided reading strategies and prereading strategies are often recommended as sources to help crash content area comprehension problems.

Herber (6) contends that guided reading strategies are designed to identify a reading task or objective and further guide students

through the reading.

The study guide, a type of guided reading strategy, is an instructor-prepared written reading activity. Dillner and Olson (3), Herber (6), and Tutolo (11) use it as a detailed reading aid to help students of different abilities to master reading assignments. It guides students to the important concepts in the assignments. The following components are present in the study guide:

1. Key Vocabulary Words. These words are highlighted to familiarize students with specialized terms.
2. Questions and Statements. These questions and statements require students to apply various levels of comprehension skills as they read.
3. Reference. In many instances, the page number (s) on which the answers are given are listed on the study guide.

Herber (6) notes that the major assumption underlying the development of the study guide is that comprehension will be enhanced if students know prior to reading, a task or objective.

Prereading strategies are techniques used to acquaint students with the concepts in a selection before they read. Three types of prereading strategies often used to facilitate comprehension are Directed Reading Questions, Cognitive Organizers, and Structured Overviews.

Rothkopt (10) and Frase (4) have conducted research concerned with the facilitative learning effects of a use of questions to direct comprehension. The following components are present in the Directed Reading Questions prereading strategy:

1. Questions written on different levels of comprehension are designed to help students reason, make judgments, refine and extend ideas about a material prior to reading.
2. Questions are directed toward the most important concepts in a reading.

David P. Ausbel's (1) investigations into the receptive learning process advanced the idea among educators to use a cognitive organizer as a type of prereading strategy. His studies maintained that the organization of the prereading strategy determines its impact on what the student already knows and how that knowledge can be related to what he is to learn. The following components are present in a model of this strategy:

1. Material broadly related to a selection is introduced before a selection is read.
2. Reference is made through the material to important events, episodes or concepts in the selection to be read.

Richard Barron (2) adapted the theoretical concepts of Ausubel's Advanced Cognitive Organizer to a development of the Structured Overview. It is a conceptualized visual-hierarchial type diagram used for the purpose of showing concept interlationships within a written material to improve comprehension. Diagrams may differ in design but the purpose they serve remains constant. The following components are present in this strategy:

1. Key words or phrases in a reading are investigated to determine a graphic conceptualizations.
2. Words are arranged in a graphic manner to show concept interrelationships.

3. Words or phrases are discussed as they represent basic concepts in a reading.

Two separate studies were conducted to test the effect of reading strategies. One study was conducted by Austin in the fall of 1980 to investigate the effects study guides have on community college students' retention of history content and reading achievement. The following major hypothesis was investigated: Community college students who complete a study guide for each chapter of study will make significantly higher scores on a history posttest and on a reading comprehension posttest than community college students who do not complete a study guide for each chapter. In addition, subhypothesis were formulated to determine if the impact of the study guide varied when age, sex, and class time were considered.

Subjects

Ten classes of 225 students enrolled in History 131 (the first semester of history) were used as subjects in this study. Four classes of 89 students were assigned to experimental groups, and six classes of 136 students were assigned to control groups.

Instruments

The following three instruments were used in the study:

1. A sixty question test selected from a test item file that accompanied the history instructors' manuals was administered to students as pre and posttests.
2. The inferential subtest of the Stanford Diagnostic Reading Test was used to measure students' comprehension skills.
3. The Fry Readability Formula was used to assess the readability level of the study guides.

Materials

A study guide for each of twenty chapters in Robert Kelly's The Shaping of the American Past, Volume I (2nd edition) was designed. The study guides were divided into four parts: Part I (Vocabulary), Part II (Questions for Discussion), Part III (Statements for Acceptance or Rejection), and Part IV (Students' Questions). The study guides included the page numbers on which the stated or implied answers could be located. The study guides were written on the eight grade readability level.

Procedure

A history pretest and the inferential subtest of Form A (Blue Level) of the Stanford Diagnostic Reading Test were administered to students during the second week of the semester. For the duration of the semester, the instructors of the experimental groups conducted regular class sessions in addition to the administration, discussion, and collection of study guides. The instructors of the control groups followed the same curriculum as the instructors of the experimental groups with the exception of the administration and collection of study guides. A history posttest and Form B (Blue Level) of the inferential subtest of the Stanford Diagnostic Reading Test were administered during the last week of the semester.

Treatment of Data and Results

The t-test was used to analyze this data, and the .05 level of significance was used for accepting or rejecting the hypotheses. On the posttest of both history and reading there was a significant difference between the two groups. The experimental groups scored below the .001 level of significance. When examining the effect of study guides on students' retention of history content and reading

achievement when their age, sex, and class time were considered, there was a significant difference in favor of females and evening students on the history posttest while there was no significant difference among subgroups on the reading posttest.

A second study was conducted by Dean-Guilford to investigate the effect of three prereading strategies: Cognitive Organizer, Structured Overview, and Directed Reading Questions on content comprehension and literal, inferential, and total comprehension reading skills. The strategies were ranked in terms of their effectiveness, and the effect of each on comprehension was analyzed by race, sex, and age.

Subjects

One hundred eighteen students in four eighth grade junior high classes were randomly selected and assigned to one of three strategy treatment groups and a control group. The Cognitive Organizer group had twenty-eight students, while Structured Overview group had thirty-four, Directed Reading Questions twenty-nine, and the control group twenty-seven. The subjects were predominately black and evenly distributed with respect to sex. The majority of the students were fourteen years of age.

Instruments

The six item multiple choice Check Your Reading SkillCards which accompanied each of ten SRA kit selections were used as an immediate content comprehension pretest. Two test items from each pretest were randomly selected to form the content posttest. The comprehension subtest of the Stanford Diagnostic Reading Test (Brown Level, A and B) was used as the pre and posttest for literal, inferential, and total reading comprehension skills.

Materials

Ten original forms for each of the three prereading strategies were designed for use with each of ten selections. The Cognitive Organizer form was a schematic design reflecting key words and phrases from each selection. Finally, six questions reflecting the content of the six multiple-choice questions on the Check Your Reading Skill Cards formed the Directed Reading Questions form.

Procedure

Each group was pretested and posttested in literal, inferential, and total reading comprehension skill areas. Each treatment group was introduced to an appropriate prereading strategy before a reading of each of ten selections. A control group read the same selections but received no strategy treatment. Each group received a six item immediate content comprehension pretest for each selection and a twenty item content comprehension posttest.

Treatment of Data and Results

T-tests were used to analyze the data. The statistical criterion for acceptance or rejection of hypotheses was at the .05 level of significance. The major result of this study indicated that the tested prereading strategies improve comprehension. The Structured Overview appeared to be more affective than were the other strategies. Specifically, content comprehension and total comprehension were more affected by the strategies than were literal and inferential reading skills. Personal characteristics such as race, sex, and age influenced the impact of the strategies on comprehension. Non-blacks, fourteen year olds and males showed significant results when compared to blacks, thirteen year olds and females.

Summary

Content comprehension is positively affected through use of the reading strategies: Study Guides, Cognitive Organizer, Structured Overview, and Directed Reading Questions. Our research results imply that secondary and college students benefit from using them. We recommend that reading strategy instruction become a frequent part of reading assignments in content subjects. They are valid sources to use in our efforts to crash content area reading problems.

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